

CHAPTER 812  
CLASSIFICATIONS AND STANDARDS FOR  
HIGHWAY-RAILROAD GRADE CROSSINGS

[Substance formerly in (06,A)Ch 1]  
[Prior to 6/3/87, Transportation Department [820]—(10,B)Ch 3]

**761—812.1(307) Purpose.** This chapter implements Iowa Code paragraph 307.26(5) “c.” This statute requires the department to classify highway-railroad grade crossings based upon their characteristics, conditions and hazards and to adopt standards for warning devices for each classification.

**761—812.2(307) Classification.** Crossings shall be classified using the Federal Railroad Administration’s predicted accident methodology.

**812.2(1)** The following formula is used to calculate an initial accident prediction for a crossing:  

$$a = K \times EI \times DT \times MS \times MT \times HP \times HL$$

where:

a = initial accident prediction, in accidents per year at the crossing

K = formula constant

EI = factor for exposure index based on product of highway and train traffic

DT = factor for number of through trains per day during daylight

MS = factor for maximum timetable speed

MT = factor for number of main tracks

HP = factor for highway paved (yes or no)

HL = factor for number of highway lanes

**812.2(2)** A final predicted accident rate is then calculated from the initial prediction using the most recent five years of accident data for that crossing.

**812.2(3)** On or before October 1 of each year, the department shall furnish to each highway authority and railroad in Iowa a list of its crossings ranked by final predicted accident rate.

**761—812.3(307) Warning device standards and their implementation.**

**812.3(1)** A crossing with a final predicted accident rate of .075 or above is a candidate for upgrading. The following are recommended minimum improvements, subject to the considerations set out in the remainder of this rule.

Number <u>Tracks</u>	Current <u>Installation</u>	Proposed <u>Upgrade To</u>
1	Crossbucks	Flashers
1	Flashers	Gate Arms
2 or more	Crossbucks	Gate Arms
2 or more	Flashers	Gate Arms
2 or more	Gate Arms	4 Quadrant Gate Arms
		or
		Raised Medians

**812.3(2)** The highway authority (governmental unit(s) having jurisdiction of the highway or street at the crossing) and the railroad shall jointly conduct a field review of a crossing they propose to upgrade.

*a.* Variations of warning devices or warning device circuitry including, but not limited to, prediction circuitry, motion sensor circuitry and cantilever assemblies shall be determined by conditions at the crossing site.

*b.* Site conditions shall determine whether safety improvements to correct these conditions should be made in lieu of the upgrades listed in subrule 812.3(1). Safety improvements are generally recommended if they would be less expensive than the upgrades and would result in a final predicted

accident rate lower than .075. Safety improvements to consider include, but are not limited to, luminaires, pavement markings, sight distance improvement, signing modifications, rail signal/traffic signal interconnections, surveillance systems and crossing surface extensions.

**812.3(3)** The highway authority shall consider crossing consolidation or closure in lieu of upgrading the warning devices at a crossing. A grade separation may also be considered, but the decision to construct a separation is based on factors beyond the scope of this chapter.

**812.3(4)** When planning a highway improvement project encompassing or adjacent to a crossing, the highway authority shall consider the effects of the project on the crossing.

**812.3(5)** An agreement between the highway authority and the railroad is required for warning device installations at a new crossing location and warning device upgrades on a detour.

**761—812.4(307) Effect of rules.**

**812.4(1)** In accordance with Iowa Code paragraph 307.26(5) “c,” the department of transportation is not liable for the development or adoption of the classifications or standards. A government agency, department, or political subdivision is not liable for failure to implement the standards.

**812.4(2)** Nothing in this chapter shall preclude a highway authority and railroad from upgrading the warning devices at any crossing under their jurisdiction.

These rules are intended to implement Iowa Code paragraph 307.26(5) “c.”

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CHAPTERS 813 to 819

Reserved